

### **REMARKS**

These remarks are responsive to the non-final Office Action of June 18, 2004. Claims 1, 7, 11-13, 16 and 20 have been editorially amended for issuance. Claims 1-20 and 23-24 are pending. New claims 23 and 24 have been added. Claims 21-22 have been withdrawn as a non-elected invention and said claims are cancelled without disclaimer. Applicant reserves the right to file a divisional application directed to the non-elected subject matter. No new matter has been added. Applicant respectfully requests reconsideration and allowance of the instant application.

### **Specification**

Paragraph numbers 35, 38, 40, 48, 53, 57 and 59 have been amended as suggested by the Examiner to overcome minor informalities. Applicant appreciates the review of the Examiner. It is respectfully requested that the objection be withdrawn. No new matter has been added.

### **Drawings**

The drawings were objected to regarding the labeling of FIG. 8. The drawings have been amended to separate the two reference characters "233" and "235" as suggested in the Office Action.

The drawings were objected to regarding the labeling of FIG. 9 and 10 and in particular the leadlines therein. The drawings have been amended to more accurately the beginning and end points of the leadlines.

The drawings were objected to regarding the reference character "207" of FIGS. 11 and 12. The Office Action cites that reference character "207" has been used to designate both a control section and an alphanumeric section. The drawings have been amended. The corrected drawings are included herewith. Applicant appreciates the review of the Examiner. Approval of the corrected drawings and withdrawal of the objections are respectfully requested.

### **Claims**

Applicant has invented new keyboard configurations having clear significant functional advantages as presented in the specification. For example, a few of these advantages include enhancing interactive experiences with new media technologies and productivity activities. Additionally, user collaboration is provided through allowing manipulation of a graphical user interface.

### **Independent Claims 1, 13, and 20**

The Office Action rejected claims 1-4, 6-16 and 19-20 under 35 U.S.C. § 103(a) under a combination of Leman (U.S. Patent No. 6,288,706) and Solhjell (U.S. Patent No. 5,621,436).

Independent claims 1 and 20 pertain to, *inter alia*, an inventive computer keyboard comprising a first input device configured to receive manual movement according to a user-selectable mode and responsive thereto, configured for scrolling content items of a display screen relative to the display screen along perpendicular axes or freeform moving a graphical pointer relative to the perpendicular axes. Neither Leman nor Solhjell, separately or in combination, teach or suggest the recited features. For example, Leman is **devoid** of describing scrolling or an input device for scrolling as recited in claims 1 and 20. In fact, Leman's device embodiments 80, 280, 480, 483 and 583 are merely limited to just pointing devices. (See Col. 4, ll. 53-61.) There is no first input device configured for scrolling content items as recited. Leman simply does not teach or suggest a scrolling function for moving content items of the display screen relative to the display screen along perpendicular axes as recited.

Solhjell completely fails to make up for the deficiencies in Leman. Solhjell is devoid of describing scrolling or an input device configured for scrolling as recited in claims 1 and 20. There is nothing about scrolling described in Solhjell's embodiments or background discussion of Solhjell. Solhjell's embodiments are limited to mouse balls 24, 35 as pointing devices. Nowhere does Solhjell teach or suggest a device configured to receive manual movement and responsive thereto, configured according to a user-selectable mode for both scrolling content items of a display screen relative to the display screen or moving a graphical pointer as recited in claims 1 and 20. When evaluating patentability under 35 U.S.C. § 103(a), all claim limitations must be considered, especially when they are missing from the prior art. See *In re Fine*, 837 F.2d

1071 (Fed. Cir. 1988) (Federal Circuit held a reference did not render the claimed combination obvious because the examiner ignored a claimed limitation that was absent from the reference). Furthermore, functional limitations must be evaluated and considered, just like any other limitation of a claim. See MPEP § 2173.05(g). In view of the foregoing, independent claims 1 and 20 are allowable.

Independent claim 13 pertains to, *inter alia*, a computer keyboard comprising a trackball device having a movable ball within an opening and a movable ball being configured to receive manual movement according to a user-selectable mode and responsive thereto configured for scrolling content items of a display screen relative to the display screen in a vertical direction and a horizontal direction or freeform moving a graphical pointer relative to two dimensions of the image display screen. Leman does not teach or suggest the trackball device as recited. In fact, Leman merely refers to element 80 as a pointing device. (See Col. 3, ll. 24-55; *see also* Col. 5, ll. 1-15). It is clear that Leman's pointing device embodiments (e.g., device 80) simply does not describe scrolling for a trackball device as recited. Thus, Leman fails to teach or suggest a trackball device configured to receive movement according to *a user-selectable mode and responsive thereto configured for scrolling content items of a display screen relative to the display screen in a vertical direction and a horizontal direction* or freeform moving a graphical pointer relative to two dimensions of the image display screen. See *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). In view of the foregoing, claim 13 is allowable.

Applicant's specification discusses an embodiment wherein a trackball device is mode selectable between scrolling and cursor control with a plurality of ways to evoke a mode switch. (Specification, p. 11, ¶ 39.) With regard to claims 1, 13 and 20, neither Solhjell, nor Leman describe or suggest a device configured to receive manual movement according to a user-selectable mode for scrolling or moving graphical pointer control. Indeed, Leman and Solhjell are solely limited to a describing a pointing device with no scrolling. In view of the foregoing, claims 1, 13 and 20 are allowable.

**Dependent Claims**

Claims 2-4 and 6-12 depend from claim 1 and are thus allowable for at least the same reasons as claim 1 and further in view of the novel and non-obvious features recited therein. For example, with further reference to claims 2-4, neither Leman, nor Solhjell, alone or in combination, describe or suggests a computer keyboard with a trackball assembly including a spherical member being rotatably configured to receive manual movement for scrolling as recited. The Office Action recognizes that Leman fails to teach or suggest a scroll sensing system as recited. (See Office Action, Pg. 7.) In fact, Leman and Solhjell both fail to teach a first input device or trackball device configured for scrolling as recited. The references are simply limited to solely pointing devices. There is no scroll sensing system. Applicant submits that the combination of the Leman and Solhjell is not legally proper.

Further with respect to claims 2 and 3, Solhjell is completely devoid of any mention, teaching or suggestion of a scrolling sensing system that determines when said spherical member is rotated for scrolling along one of the perpendicular axes as is recited. The Office Action asserts that Col. 2, ll. 7-26 of Solhjell teaches a scrolling sensing system. (Office Action, Pgs. 7-8). On the contrary, Solhjell merely describes an internal mouse control for ball movement and cursor movement. (See Col. 2, ll. 7-26). There is absolutely no a description of a scroll sensing system, nor the recited scroll sensing system for a trackball device with the user-selectable mode configuration for scrolling or graphical pointer control. In view of the foregoing, claims 2 and 3 are allowable.

Claim 3 pertains to, *inter alia*, a keyboard with the recited trackball assembly comprising a scrolling sensing system being configured to sense a transition state of the spherical member when the member is rotated for a first directional scrolling along one of the perpendicular axes and responsive to the transition state change to a second directional scrolling along the other of the perpendicular axes. There is no scrolling or scroll sensing system as discussed with respect to claim 2. Further, Solhjell is completely **devoid** of any such suggestion or mention of 1) scrolling along perpendicular axes, 2) a transition state of a spherical member for scrolling, much less 3) sensing a transition state of the spherical member when the member is rotated for a first directional scrolling along one of the perpendicular axes and 4) responsive to the transition state

change to a second directional scrolling along the other of the perpendicular axes. In view of the foregoing, claim 3 is allowable.

In further reference to claim 7, neither Leman, nor Solhjell describe or suggest a first input device comprising a scroll wheel assembly configured to receive manual movement according to a user-selectable mode and responsive thereto, configured for scrolling content items of a display screen relative to the display screen along perpendicular axes or freeform moving a graphical pointer relative to the perpendicular axes. The Office Action asserts that device element 583 of Leman comprises a scroll wheel assembly. (Office Action Pg. 8). On the contrary, according to Leman, device element 583 merely indicates a thumbwheel for a "pointing device". (See Col. 6, ll. 65-67 below). Leman is completely **devoid** of any teaching or suggestion that the thumbwheel is a scroll wheel assembly or performs the function of scrolling as recited. Solhjell's embodiments fail to cure the deficiencies of Leman. In view of the foregoing, claim 7 is allowable for this reason as well.

Claims 14-16, 19 and 23 depend from claim 13 and are thus allowable for at least the same reasons as claim 13 and further in view of the novel and non-obvious features recited therein.

Claims 15 and 16, similar to claims 2 and 3, respectively, pertain to, *inter alia*, a trackball assembly including a spherical member being rotatably configured to receive manual movement and a scrolling sensing system. As discussed previously, neither Leman, nor Solhjell teach or suggest such an inventive feature. As such, claims 15 and 16 are allowable for this additional reason.

Claim 24 depends from claim 20 and is thus allowable for at least the same reasons as claim 24 and further in view of the novel and non-obvious features recited therein.

Dependent claim 11, and new dependent claims 23 and 24 pertain to, *inter alia*, a keyboard as recited comprising a user-selectable mode for scrolling or graphical point control is responsive to voice inputs. Claim 11 depends from claim 1 and claim 24 depends from claim 20 and both dependent claims pertain to the recited first input device, respectively; and claim 23 depends from claim 13 and pertains to the recited trackball device. Neither Leman, nor Solhjell teach or suggest the recited inventive features. In fact, Leman and Solhjell are devoid of any

mention or suggestion of voice inputs, or using voice inputs for the devices for scrolling or graphical pointing as recited. In view of the foregoing, claim 11, 23 and 24 are allowable for these reason as well.

The Office Action rejected claims 5 and 17-18 under 35 U.S.C. §103(a) under the combination of Leman and Solhjell as applied to claims 1-4, 6-16 and 19-20 and further in view of U.S. Patent No. 4,720,703 to Schnarel.

The Office Action recognizes that neither Leman, nor Solhjell teach or suggest a scrolling sensing system that determines when the spherical member is rotated for directional scrolling along one of the perpendicular axes to a threshold level after a transition state of the directional scrolling so as to maintain said scrolling. In fact, Leman and Solhjell fail to teach or suggest the recited keyboards with the first input device (claim 1) and the trackball device (claim 13) as discussed in the foregoing. Schnarel fails to cure the deficiencies of the Leman and Solhjell combination. In fact, Schnarel's embodiments do not describe scrolling for the first input device and trackball device as recited. The passage cited in the Office Action at p. 11, ¶ 7 merely describes moving a viewport in the direction of cursor movement. (Col. 4, ll. 19-28).

The mere fact that Schnarel discusses a movable viewport has **no** bearing on 1) the recited scrolling of content items of a display screen relative to the display screen, 2) the recited scroll sensing system, or 3) the recited transition state for a spherical member. The legal standard of obviousness requires that "particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the matter claimed." *In re Kotzab*, 217 F.3d 1365, 1371 (Fed. Cir. 2000) (emphasis added). As clearly held by the U.S. Court of Appeals for the Federal Circuit, "[i]t is impermissible to use the claimed invention as an *instruction manual* or *template* to piece together the teaching of the prior art ... [o]ne cannot use hindsight construction to pick and choose among isolated disclosures ... to deprecate the claimed invention." *In re Fritch*, 972 F.2d 1260, 1266 (quoting *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ 2d 1596, 1600 (Fed. Cir. 1988) (emphasis added)). This is especially true, when Schnarel has **no specific description** of claim 5, e.g., 1) a scrolling sensing system that 2) determines when the spherical member is rotated for directional scrolling 3) along one of the perpendicular axes to 4) a threshold level 5) after a

transition state of the directional scrolling 5) so as to maintain said scrolling.

Further, Schnarel has **no specific description** of claim 17, e.g., the trackball device further including 1) a scrolling sensing system that 2) determines when the movable ball is rotated for vertical scrolling to 3) a threshold parameter 4) after a transition state of the horizontal scrolling 5) so as to maintain said vertical scrolling.

Furthermore, Schnarel has **no specific description** of claim 18, e.g., the trackball device further including 1) a scrolling sensing system that 2) determines when the movable ball is rotated for horizontal scrolling to 3) a threshold parameter 4) after a transition state of the vertical scrolling 5) so as to maintain said horizontal scrolling during said rotation. In view of the foregoing, the combination of the Leman, Solhjell, and Schnarel is not improper. Claims 5 and 17-18 are thus allowable.


**CONCLUSION**

For the foregoing reasons, it is respectfully submitted that this application is in condition for allowance. Should the Examiner believe that anything further is desirable in order to place the application in better form for allowance, the Examiner is respectfully urged to contact Applicant's undersigned representative at the below-listed number. If any additional fees are required or if an overpayment has been made, the Commissioner is authorized to charge or credit Deposit Account No. 19-0733.

Respectfully submitted,

BANNER & WITCOFF, LTD.

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By:   
Darrell G. Mottley  
Registration No. 42,912

Eleventh Floor  
1001 G Street, N.W.  
Washington, D.C. 20001-4597  
(202) 824-3000